

-Vocabulary words are embedded and introduced when they become useful in a lesson instead of at the beginning of a unit

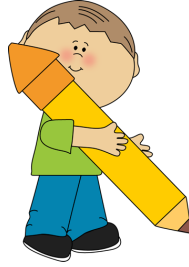
-"Scientists have a word for this- it's called..."

(This is an example of how vocab should be introduced rather than front loading at the beginning of the lesson)

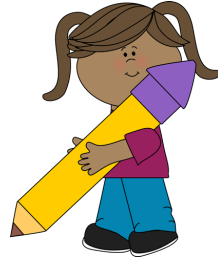
-Washington University in St. Louis MySci Units

**These vocabulary words are connected with specific challenges in the STEAM book. Even with the connections shown at the bottom of the cards many of the words can be used for other challenges in the book as well. Feel free to use the words in all challenges that relate to the concept.

2



Grades
K – 2



STEAM

Vocabulary Cards

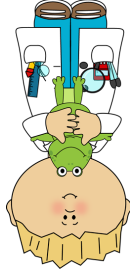


Accuracy

The ability to hit a defined target

*Marshmallow Catapult

4



Absorption

To soak up or take in

*Evaporation Art

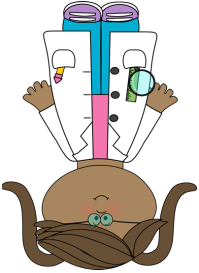
3

*Acid Attack, Exploding Sandwich Bag, Lava Lamp, Lemon Battery, Self-Inflating Balloon

A chemical substance that dissolves in water with a sour taste that forms a salt when mixed with a base



Acid

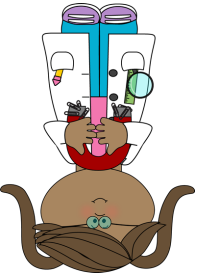


Air Resistance

A force that pushes against an object moving through the air

*A Day at the Airplane Races, Pop Can Races, Popcorn Huff and Puff

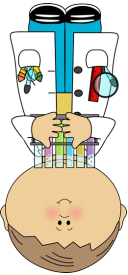
Activation



Adding one substance starts a reaction within another substance

*Cotton Candy Fluffy Slime

Active



Always moving, busy

*Stacking Cup towers

*How to Make Lightning, Magnet Painting

12

To pull something closer

Attract



Air Stream

A current of air

*Floating a Ping Pong Ball

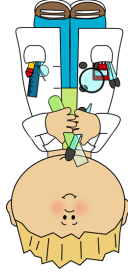


*Blue Sky

11

The air that surrounds Earth

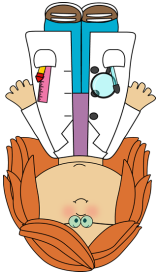
Atmosphere



*Kaleidoscope

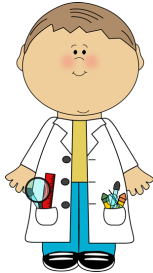
The space or shape formed
when two lines or surfaces
meet each other

Angle



*Button, Button, Button, and Zipline

The state of having your weight spread equally so that you do not fall



Balance

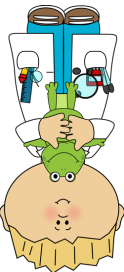
Bending



To use force to curve out of a straight line or position

*Spaghetti Towers

Balanced Forces



When the forces pushing on an object are the same size

*Floating a Ping Pong Ball, Pop Can Races

Base (Structural)

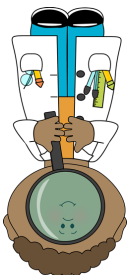


The bottom or lowest part of something

*Stacking Cup Towers

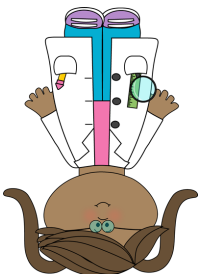
A substance that is found in most plants and animals

Calcium (Ca)



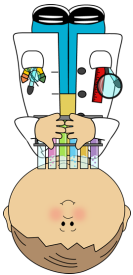
Force pushed up by fluid on an object

Buoyancy Force



The ability of an object to float in water or air

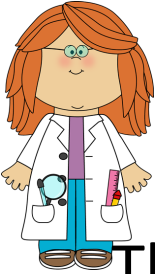
Buoyancy



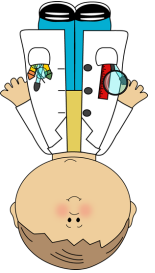
The combined force of attraction among water molecules and with the molecules of surrounding materials

*Evaporation Art

Capillary Action

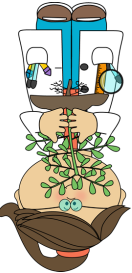


Catchment Basin



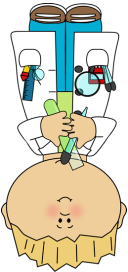
Common place where all water goes in a region

*Can You Catch the Water?



*Grass Heads

Carbon Cycle



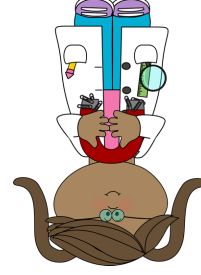
The cycle of carbon in living things to form food

Carbon Dioxide (CO₂)

A Colorless, odorless gas in the air that plants use to grow

*Exploding Sandwich Bag

The path electricity follows
from a battery through a bulb
and back to the battery



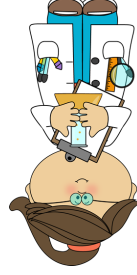
Circuit



Center Of Gravity

The point of an object when
balanced

The part of the body that
protects the lungs and heart,
behind the ribs



Chest Cavity

A process in which one
substance is changed to
another substance

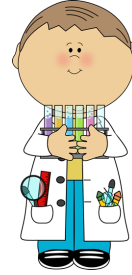
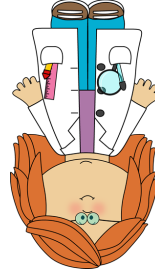


Chemical Reaction

broken up into parts.

What you see when light is

Color Scattering



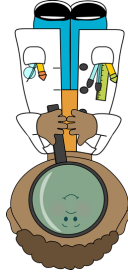
Classify

To group organisms based on
their similarities and
differences

together

The action or state of sticking

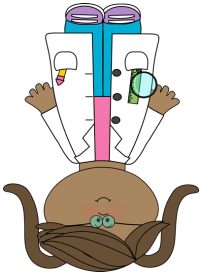
Cohesion



programmers create and use
to tell a computer what to do

The language that

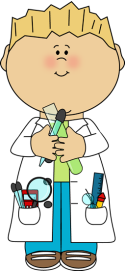
Code



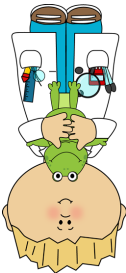
*Toothpick Bridges

An object that supports another structure

Column



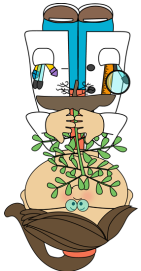
Compression



Pushing objects/substances together

*Spaghetti Towers

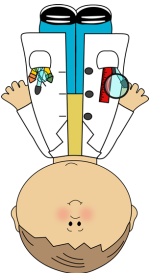
Compare



Look for ways that objects or events are alike or different

*Buttons, Buttons, Buttons

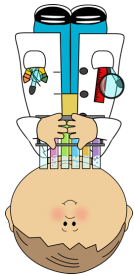
Compound



A combination of two or more elements

*Cornstarch Quicksand

Cross Section



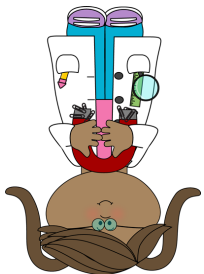
A cutting made across something (as a log or an apple)

Conductor



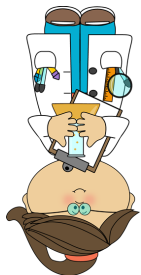
A material in which thermal energy moves easily

Covalent Bond



The bond formed by the sharing of a pair of electrons by two atoms

Copper

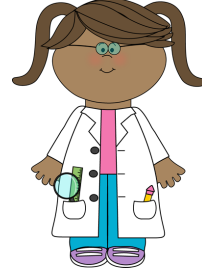
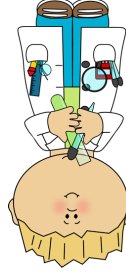


Metallic element that is a great conductor of electricity

manageable chunks

An approach for breaking
down a large project into

Design Process

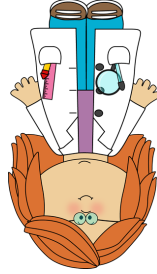


Debug

Find and fix a coding error

*Code Your Name

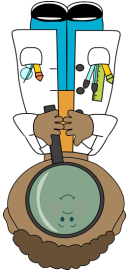
The way something is made
or built; A thought out plan;
to plan



Design

The concentration of matter
in an object

Density

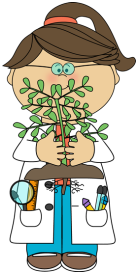


how things work

*Lego Maze

A simple drawing with labels
that shows the parts of a
system, often used to explain

Diagram



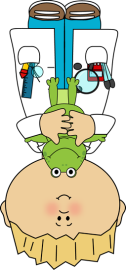
Direction Of Current



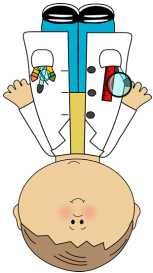
The direction in which a
positive charge would move

*Build an Electromagnet

*Just Breathe



Diaphragm



A muscle that is used when
breathing

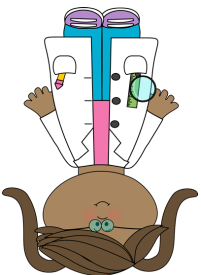
Direction

The place toward which
something is moving or
forcing

*Lego Shadow Towers, Sound Cups

A large rounded roof or ceiling shaped like half of a ball

Domes



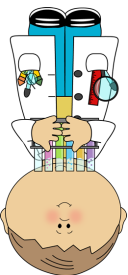
Dissolve



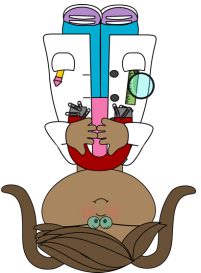
To mix completely in water

To make an object change direction

Diver



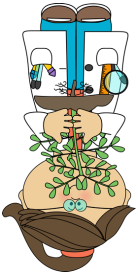
Distance



The amount of space between things or places

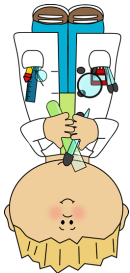
A current of air

Draft



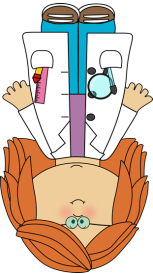
Energy that gives power to
things that run on electricity

Electrical Energy



A very small drop

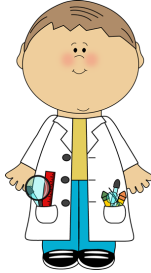
Droplet



Drag

Something that slows down
motion

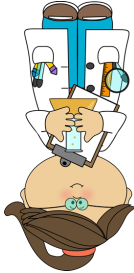
A flow of electric charges



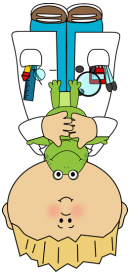
Electrical Current

Activity between two charged particles

Electrostatic Forces



A magnet that can be



Electromagnet

turned on or off and is made by sending electricity through metal

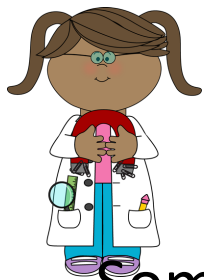
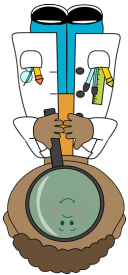
Tiny parts that move around in an atom that make electricity

Electron



The wearing away and
moving of rocks or soil by
water, wind, ice, or gravity

Erosion

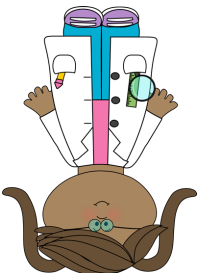


Energy

Something that can cause
change or do work. Heat,
sound, light, gravity,
electricity are all energy

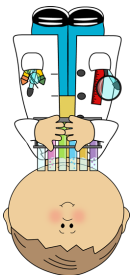
All of the conditions that
affect a living thing

Environment



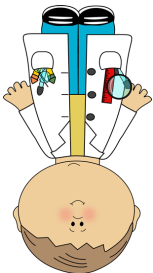
A person that designs and
builds machines, structures
and products

Engineer

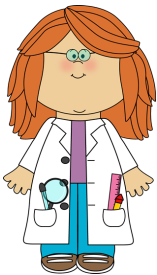


To stay on top of a liquid

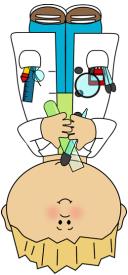
Float



Evaporation

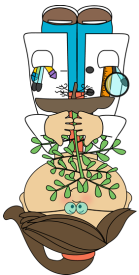


To change from a liquid to a gas



Expand

To get larger



Experiment

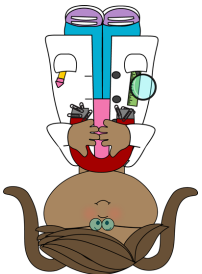
Make a plan to collect data
and then share the results
with others

*Magnet Painting, Zipline

72

The force that builds up when two objects rub against each other

Friction



Fluid



Liquid or substance that can flow

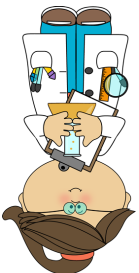
*Lava Lamp, Self-Inflating Balloon

*Musical Straws

71

The number of times per second that a wave cycles

Frequency



*Gumdrop Geodesic Dome, Popcorn Huff and Puff

70

A push or a pull. A force can move an object

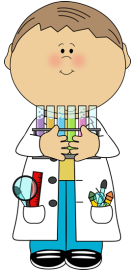
Force



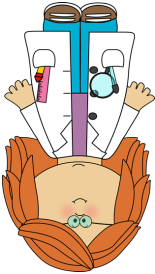
The pivot point of a lever

*Marshmallow Catapult

Fulcrum



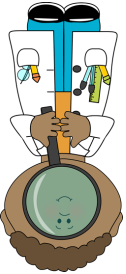
Gravity



A force that pulls objects
toward Earth's center. Gravity
pulls you down a slide

*A Day at the Airplane Races, Hoop Gliders, Marble Rollercoaster

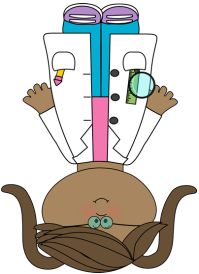
*Grass Heads



Germinate

To sprout a plant from a seed

Gas

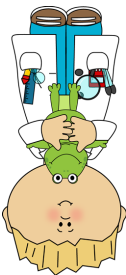


Matter that changes shape to
fill all the space it is in

*Exploding Sandwich Bag, Self-Inflating Balloon

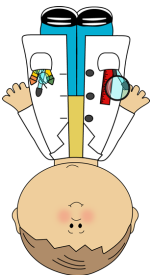
A simple machine made of a flat surface set at an angle to another surface

Inclined Plane



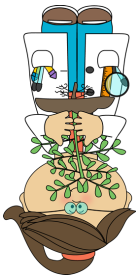
Gust

A powerful wind



Height

The distance from bottom to top of something

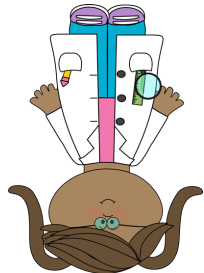


Horizontal

Being on the same level

ideas

A means of communicating



Language

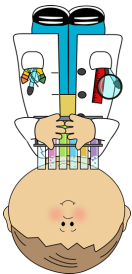


Instrument

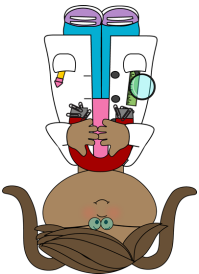
Something used to make
music

*Rain Stick

Parts of the Earth's surface-
Valley, Mountain, hills



Landform

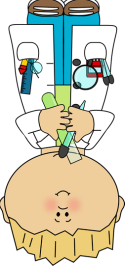


Kinetic Energy

The form of energy that an
object has when it is moving

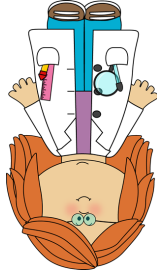
*A Day at the Airplane Races, Marble Roller Coaster, Marshmallow Catapult

The order of changes that
happen in the lifetime of a
plant or animal



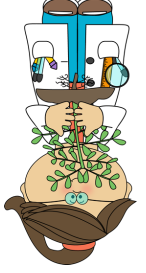
Life Cycle

Covering an area with a
material



Layer

To rise from the ground



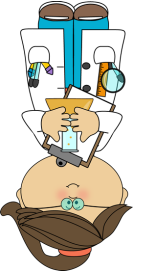
Lift

Launch

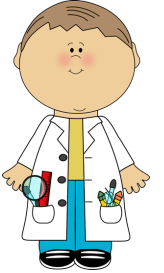


To use force to start
something moving

A hard-sedimentary rock,
composed mainly of calcium
carbonate



Limestone



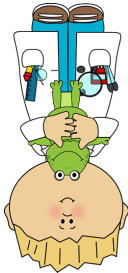
Light

A kind of energy that you can
see

A flash of light in the sky
made by electricity



Lightning



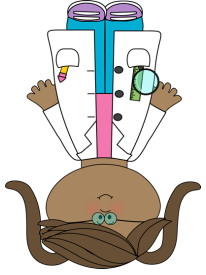
Light Rays

The straight path on which
light energy travels

structure

holds the weight of the

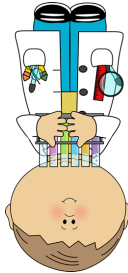
A part of the structure that



Loadbearing

hear

To pay attention in order to

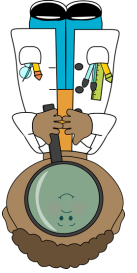


Listening

to breathe

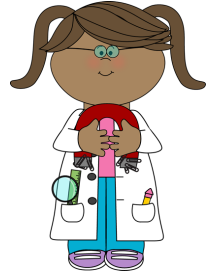
Birds and mammals use lungs

Body parts that take in air.



Lungs

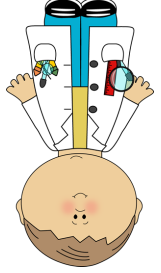
Liquid



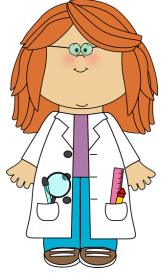
Matter that flows and takes
the shape of its container

A group of paths to solve a puzzle

Maze



Magnet



An object that pulls iron and steel toward it

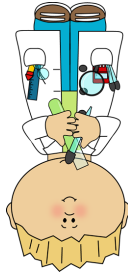
The amount of material in something (measured by weight)

Mass



An area around a magnet where magnetic force can be felt

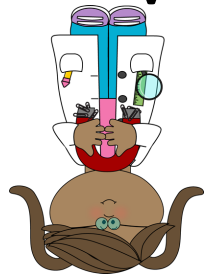
Magnetic Field



music

*Rain Stick

A combination of sounds that people enjoy. Use instruments such as a piano, a violin, and a trumpet to make



Music

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Mixture

Two or more kinds of matter put together. A sandwich is a mixture



*Cornstarch Quicksand, Cotton Candy Fluffy Slime

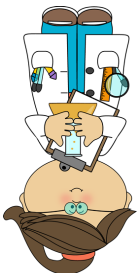


*Popcorn Huff and Puff

Motion

Moving from one place to another

Muscle

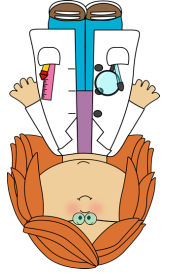


Part of a body that helps it move by getting tight or loose

*Just Breathe

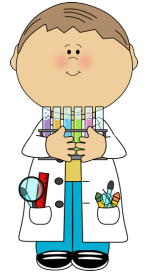
103

Two people working together



Partner

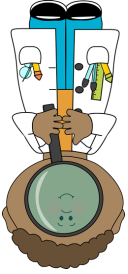
Non-Newtonian
Fluid



A fluid that does not match
Newton's Law

*Cornstarch Quicksand, Cotton Candy Fluffy Slime

When no light can be seen
through an object

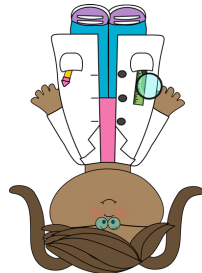


Opaque

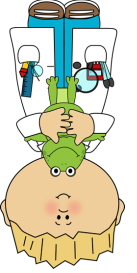
Use tools and the senses to
learn about the properties of
an object or event

*Popcorn Huff and Puff

Observe



The process by which plants
make their own energy (food)



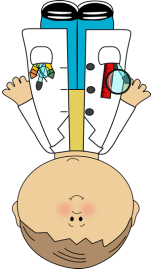
Photosynthesis



Pentagon

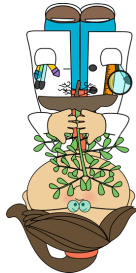
A shape with 5 angles and
five sides

A magnet that keeps its
power when taken away from
the original power



Permanent Magnet

The time between wave
crests



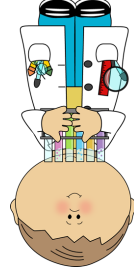
Period

Substances that give color to something, such as the colors in paints

*Evaporation Art



Pigments

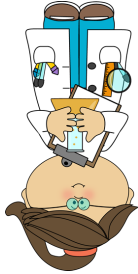


Potential Energy

The energy stored by an object due to its state or position. It is measured in joules

*Marble Rollercoaster, Marshmallow Catapult

*Magnet Painting

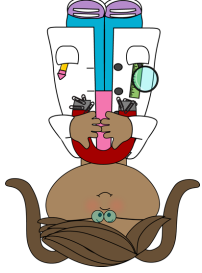


Plant

A living thing that does not move on its own and makes its own food from sunlight

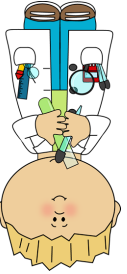
*Grass Heads

Poles



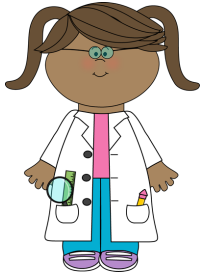
The places where the pulling force of a magnet is strongest

A clear object that breaks light
into its colors

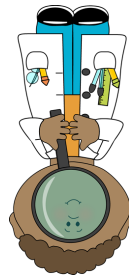


Prism

When two or more
measurements are close to each
other



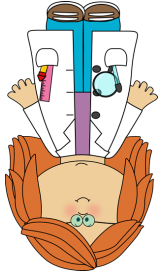
Precision



Pressure

The force over a given area

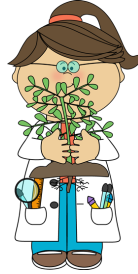
Primary Colors



Three main colors - red, yellow,
blue

Instructions for a computer to follow

Program



*Lava Lamp

A substance that changes during a chemical reaction

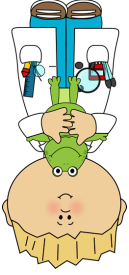
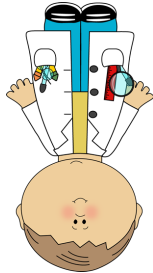
Reactant

*Pop Can Races

*Acid Attack

Anything that you learn about an object by using your senses

Property



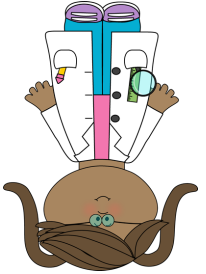
Tiny particles in the center of an atom that have a positive charge

Protons

When two or more substances
combine to create a new
substance

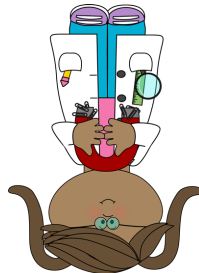


Reaction



Region

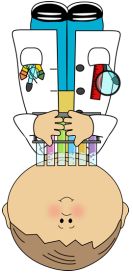
A broad geographic area



Reflection

To bounce back light

Refraction



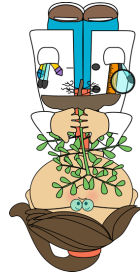
To bend or change the direction
of light

To push something away

Repel

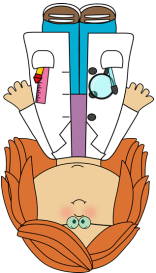


Rotate



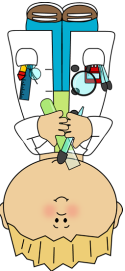
To spin around a center or axis

Respiratory System



The group of organs used to
breathe

Rise



To move upward

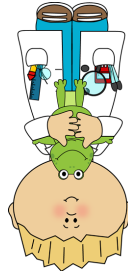
How something looks on the
outside

Shape



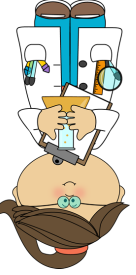
Something that forms when an
object blocks light

Shadow

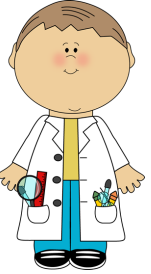


To drop to the bottom of water

Sink



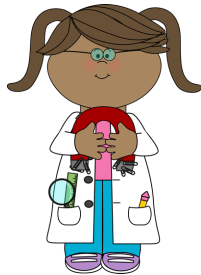
Runoff



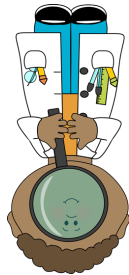
Rain that does not evaporate or
soak into the ground

*Buttons, Buttons, Buttons

How big or small something is



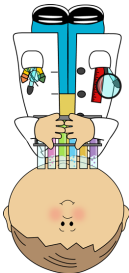
Size



Solution

A mixture of two different kinds
of matter

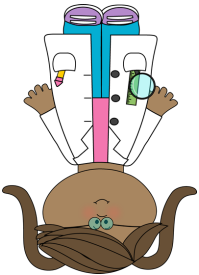
*Cotton Candy Fluffy Slime



Slope

A slanted or tilted surface

*Marble Rollercoaster



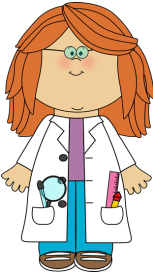
Solid

Matter that keeps its shape and
size

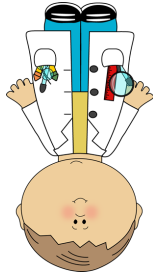
*Cornstarch Quicksand, Toothpick Bridges

*Sound Cups

A kind of energy that you can hear. Birds make sounds when they sing



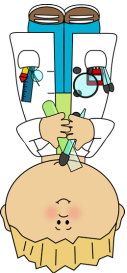
Sound



Sphere

Shape that is made up of points equal distance from the center

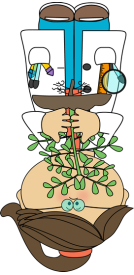
*Gumdrop Geodesic Domes



Sound Waves

Mechanical waves that are caused by a vibration

*Musical Straws



Speed

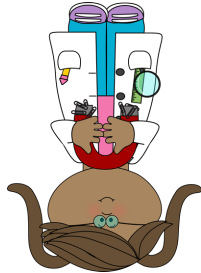
How fast or slow something moves.

*Marble Rollercoasters, Stacking Cups, Zipline

The buildup of an electric charge
on the surface of an object



Static Electricity



Color, shape or design of an
object

Style



Structure

The way in which parts are put
together or in which something is
made

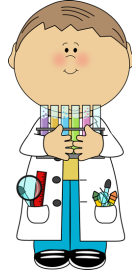
Struts



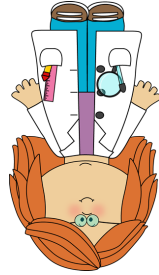
Part of a structure used to resist
pressure

To hold up something else

*Toothpick Bridges



Support



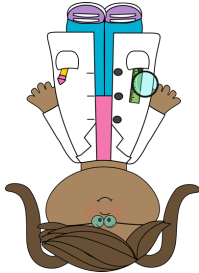
The skin like surface on water (or other liquids) that pulls it together into the smallest possible volume

Surface Tension

152

*Drops on a Penny

Surface

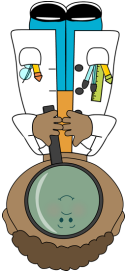


The outside or top part of a thing; the part of the water or land that touches the air above it

*Dancing Raisins

150

Surface Area



The area of liquid (or solid) exposed to or touching the air

*Design a Boat Challenge

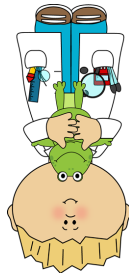
151

*Gumdrop Geodesic Dome

Repeating a single shape on a design



Tessellate

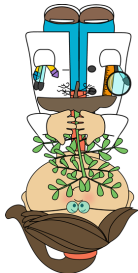


Topographical Features

The surface, shape, and composition of a land area

*Can You Catch the Water?

*Stacking Cups



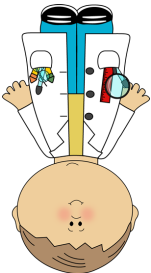
Thrust

To push or drive with force

*A Day at the Airplane Races, Hoop Glider

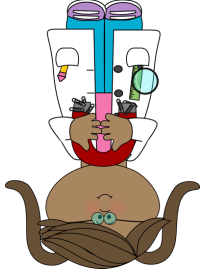
Time

Measurement of when things happen



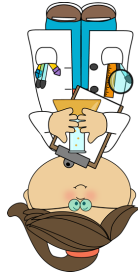
A figure that has three sides and
three angles

Triangles



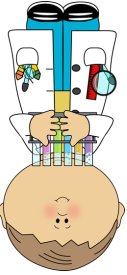
When all light shines through an
object

Transparent



The support bars of a building

Truss



Translucent

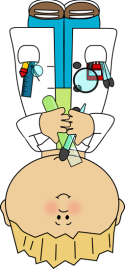
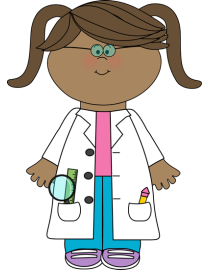


When some light can be seen
through an object

*Musical Straws

A part inside the ear that vibrates
to sounds

Tympanic Membrane



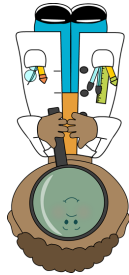
*Float a Ping Pong Ball, Marble Rollercoaster

164

The rate of change in an object's
position

Velocity

*Lemon Battery

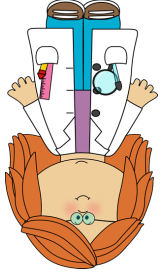


*Floating a Ping Pong Ball, Pop Can Races

162

Unbalanced Forces
Forces pushing on an object are
not the same size, results in
movement

Variable

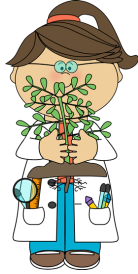


Part of an experiment that can
change

163

Going straight up or down from a level surface

Vertical



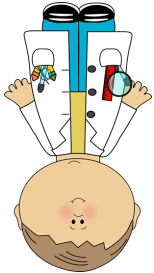
*Can You Catch the Water?

168

The area that drains into a river or lake

Watersheds

*Cornstarch Quicksand, Lava Lamp

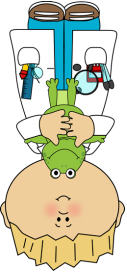


*Sound Cups

Vibrate

Moves back and forth very fast. A drum vibrates when you strike it

*Musical Straws, Rain Stick



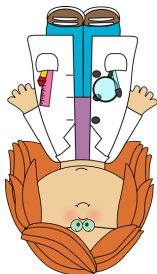
166

Viscosity

The way a liquid does and does not flow. Juice pours at a faster speed than honey

167

A constant background noise



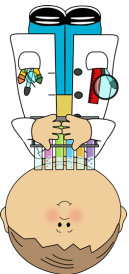
White Noise



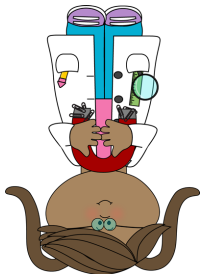
Wave

A traveling disturbance that moves through space and matter

The measure of the pull of gravity on an object



Weight



Wavelength

The distance between two corresponding points on back-to-back cycles of a wave